CS3306 Workplace Technology and Skills - Part II Exam questions

Each of the 5 question should be answered personally (no team work here please) in a maximum of 250 words using a structured markdown (.md) format. You can find a markdown cheat-sheet [here](). Each of the 5 questions is worth 10 marks. The grading scheme breaking down the 10 marks within the each question is to be taken as a guideline.

Questions should be submitted anytime before March 06, 6pm, on Canvas in the assignment "Departmental Exam" as a .tgz archive. The archive should contain 5 .md files named Qx.md with x being the question number.
Late submissions will score 0.

Most questions do not have a single correct answer, you are being asked to drive a discussion by analysing the question, provide an opinion and justify it.

Exam Question 1: DevOps as a method (10 Marks)

Often developments in computer science are driven by need. For example programming languages had no choice but to to get simpler so that more people could could learn how to code far more quickly and with less human error. What drove the development of DevOps?

> (5 Marks)

In particular, DevOps was developed because people refused to follow software development rules (like waterfall). What rules were being broken and how could DevOps be used to overcome wide spread rule breaking?

> (5 Marks)

Exam Question 2: DevOps Tools (10 Marks)

There are different stages in DevOps; Planning, testing, deployment, monitoring. For each stage name what you think is an appropriate tool and give a brief description of that tool.
(Note - there is no 'perfect' tool that is so much better than other tools. I am asking the question to encourage you to do some analysis.)

> (2.5 marks x 4)

Exam Question 3: DevOps and Azure tools (10 Marks)

Give two of the advantages and disadvantages of using Microsoft's azure as a DevOps solution for your client/clients.

> (2.5 marks x 4)

Exam Question 4: Language and Project (10 Marks)

Please provide a short description of the language you selected. Where does it stand in the landscape of languages. Any related/neighboring languages?

> (3 Marks)

Does it leverage, one particular paradigm? Multiple? Is your language inspired from other languages? Illustrate what make this language particular. What feature does it provide you that say C wouldn't?

> (2 Marks)

What is the target audience for the language that you picked. Is it a general purpose language? Focused on embedded systems, hi-performance systems? Data sciences?

> (2 Marks)

Can you provide examples of 2 open source projects (aside from yours) that are using that language? Can you give a one-liner explaining what the scope of the project is? Any reason these projects selected that language in particular?

> (3 Marks)

Exam Question 5: Presentation and Communication Skills (10 Marks)

During the course of the two workshops, a lot of verbal and non-verbal aspect of Presentation and Communication were discussed. The workshop slides will be available on canvas after the workshops.

1. Illustrate two non-verbal communication styles you use on a daily basis.

> (2 Marks)

2. Do you believe that as CS students it is difficult to communicate to others, i.e., the work we do in college or the role you will undertake in your placement? Explain your answer.

> (2 Marks)

3. Based on the presentation skills slides, we learned that the presentation should really be dependent on the audience. Write a short abstract introducing Python to a Matlab user and a short abstract explaining Python to my grandma (assume no CS knowledge).

> (3 Marks)

4. As presented in the communication skills slides on slide 16, discuss which aspect of team communication are proactively dealt with in the way teams are producing software. In particular, mention useful tools that may used in code development processes allowing better team communication (in or out the DevOps scope).

> (3 Marks)